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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/849,298

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Michiaki Hayashi

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EXAMINER

BELLO, AGUSTIN

ART UNIT

PAPER NUMBER

2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/28/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/849,298

Applicant(s)

HAYASHI ET AL.

Examiner

Agustin Bello

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 14 and 15 recite the limitation "the second polarization adjuster." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4, 9, 12, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Wooten (U.S. Patent No. 6,493,473).

Regarding claims 1 and 9, Wooten teaches dividing an input light (reference numeral 12 in Figure 1) including a signal light and noise light within a signal wavelength band of the signal light into a first component with a first polarization direction parallel to a polarization direction of the signal light and a second component with a polarization direction orthogonal to the first

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polarization and applying the first component to a first arm and the second component to a second arm; shifting an optical phase of the second component in the second arm so that the optical phase of the second component in differs by π from the first component the second arm in the first arm (column 13 lines 47-60); and combining (reference numeral 60 in Figure 1) the first component output from the first arm and the second component output from the second arm to cause the noise lights included in the first and second components interfere with each other.

Regarding claim 4 and 12, Wooten teaches that wherein the optical phase shifting step shifts the optical phase of the second component in the second arm according to its wavelength using a spectral delay having a delay amount that differs according to a wavelength (reference numeral 22B or 62 in Figure 1).

Regarding claims 17-19, Wooten discloses a phase plates in the first and second arm (reference numeral 22A, 22B in Figure 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 5, 10-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wooten in view of Han (U.S. Patent No. 6,678,431).

Regarding claims 2, 3, 5, 10, 11, 13, Wooten teaches adjusting the polarization of the signal light (reference numeral 132, 135 in Figure 1), but differs from the claimed invention in

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that Wooten fails to specifically teach detecting an intensity of a base repetition frequency component out of the first component in the first arm; and adjusting the polarization to increase the intensity of the base repetition frequency component. However, Wooten suggests as much in the automatic polarization adjustment method disclosed (column 15 line 48 – column 16 line 41). Furthermore, Han teaches that it is well known in the art to detect an intensity of a base repetition frequency component out of the first component in the first arm (reference numeral 116 in Figure 1) and adjusting the polarization (reference numeral 112 in Figure 1) to increase the intensity of the base repetition frequency component. One skilled in the art would have been motivated to detect an intensity of a base repetition frequency component out of the first component in the first arm and adjust the polarization to increase the intensity of the base repetition frequency component in order to compensate for polarization mode dispersion (column 1 lines 11-14 of Han).

Allowable Subject Matter

8. Claims 6-8, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 14-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Agustin Bello
Primary Examiner
Art Unit 2613

AB